
From the Editors

Rising oil prices in the 1970's triggered an interest in developing "small-scale" biogas systems in the United States.

Unfortunately, only 20 of the 70 systems installed at commercial farms during this developmental period are still operational. Reasons for successes and failures are many and much has been learned. Lessons learned from pioneering systems have improved biogas system engineering, operation, and cost effectiveness. Systems installed after 1982 had a far greater success rate than those built earlier.

The 1990's have seen a renewed interest in commercial biogas system development, due largely to their environmental benefits. Today's highly efficient livestock industry has met expanding residential development in rural areas. The large volumes of manure generated from these specialized livestock facilities have the potential to cause offensive odors, surface and groundwater contamination, and emissions of methane, a greenhouse gas. Biogas technology can significantly reduce these undesirable environmental impacts in a cost effective manner for many farms, when methane is used as an energy source to develop a new farm profit center. Maximizing farm resources in this manner may prove essential to remain competitive and environmentally sustainable in today's livestock industry.

This handbook was developed to provide a framework for farms that are considering biogas production and use as a manure management option. When coupled with the use of FarmWare, the handbook is intended to provide a step by step methodology for making a "go" or "no go" business decision, based on technology choice, operational ability, and financial performance. The handbook has been printed as loose leaf pages in a ring binder. This format was chosen because it facilitates updating as we learn more and improve these methods and technologies. AgSTAR participants will be updated regarding these changes as they occur.

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